

Application No. 10/043,404
Response to Final Office Action

Customer No. 01933

Listing of Claims:

1. (Currently Amended) A power supply system which generates supply electric power to drive a load using power generation fuel, said power supply system comprising:

5 a fuel charged portion in which the power generation fuel is charged;

power generating means for generating power generation electric power by using the power generation fuel;

10 output controlling means for operating and stopping the power generating means ~~according to a consumption of power due to~~ based on a drive state of the load; and

start-up controlling means for supplying start-up electric power used for operating the output controlling means to the output controlling means.

2. (Previously Presented) The power supply system according to claim 1, wherein the start-up controlling means supplies electric power independent from the operation of the power generating means to the output controlling means as the start-up
5 electric power at the time of starting up the power generating means, and supplies electric power based on the power generation electric power generated by the power generating means to the

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output controlling means as the start-up electric power after starting up the power generating means.

3. (Original) The power supply system according to claim 1, wherein the start-up controlling means includes switching means for switching supply paths of the start-up electric power to the output controlling means at the time of starting up the power generating means and after starting up the power generating means.

4. (Original) The power supply system according to claim 1, wherein the start-up controlling means includes a start-up power supply portion which holds predetermined electric power independently from the operation of the power generating means, and supplies the electric power from the start-up power supply portion to the output controlling means as the start-up electric power at the time of starting up the power generating means.

5. (Original) The power supply system according to claim 4, wherein the start-up power supply portion includes a primary cell.

6. (Previously Presented) The power supply system according to claim 4, wherein the start-up power supply portion includes

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electric power charged and held by electric power supplied from
outside of the power supply system prior to the start-up
5 operation of the power generating means.

7. (Original) The power supply system according to claim 1,
wherein the start-up controlling means includes an auxiliary
electric power holding portion which charges a part of the power
generation electric power generated by the power generating
5 means, and supplies charge electric power of the auxiliary
electric power holding portion to the output controlling means as
the start-up electric power after starting up the power
generating means.

8. (Original) The power supply system according to claim 1,
wherein the power generating means includes a fuel cell which
generates the power generation electric power by an
electrochemical reaction using the power generation fuel supplied
5 from the fuel charged portion.

9. (Original) The power supply system according to claim 8,
wherein the fuel cell is a fuel reforming type fuel cell
including a fuel reformer which reforms the power generation fuel
and extracts a specific component, a fuel electrode to which the

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5 specific component is supplied, and an air electrode to which oxygen in air is supplied.

10. (Previously Presented) The power supply system according to claim 1, wherein the fuel charged portion is detachable.

11. (Previously Presented) The power supply system according to claim 1, wherein the power supply system is modularized and configured such that a physical outside shape of the power supply system has a shape and dimensions which are
5 substantially equivalent to a shape and dimensions of a corresponding general-purpose chemical cell.

12. (Original) The power supply system according to claim 11, wherein the power supply system has a double-electrode terminal structure.

13. (Previously Presented) An electronic device connected to the power supply system according to claim 1, wherein the load operates with the supply electric power supplied from the power supply system.

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14. (Original) The electronic device according to claim 13, wherein parts except the fuel charged portion in the power supply system are integrally constituted with respect to the electronic device.

15. (Previously Presented) The electronic device according to claim 13, wherein the power supply system is modularized and at least the fuel charged portion is detachable with respect to the electronic device.

16. (Currently Amended) A power supply system which generates supply electric power to drive a load using power generation fuel, said power supply system comprising:

5 a fuel charged portion in which the power generation fuel is charged;

power generating means for generating power generation electric power by using the power generation fuel;

10 electric power holding means for holding electric charge based on the power generation electric power generated by the power generating means, wherein the electric charge is adapted to be used to generate electric power to drive the load; and

system controlling means for controlling operation and stopping of the operation of the power generating means and for controlling charging and stopping of the charging of the electric

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15 power holding means in accordance with a change in the electric
power held by the electric power holding means.

17. (Original) The power supply system according to
claim 16, wherein the power generating means includes a fuel cell
which generates the power generation electric power by an
electrochemical reaction using the power generation fuel supplied
5 from the fuel charged portion.

18. (Original) The power supply system according to
claim 17, wherein the fuel cell is a fuel reforming type fuel
cell including a fuel reformer which reforms the power generation
fuel and extracts a specific component, a fuel electrode to which
5 the specific component is supplied, and an air electrode to which
oxygen in air is supplied.

19. (Previously Presented) The power supply system
according to claim 16, wherein the electric power holding means
comprises at least one capacitance element.

20. (Previously Presented) The power supply system
according to claim 16, wherein the electric power holding means
has a structure such that a plurality of capacitance elements are
connected with a predetermined relationship.

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21. (Original) The power supply system according to claim 16, further including supply electric power generating means for generating the supply electric power, based on held electric power held in the electric power holding means.

22. (Original) The power supply system according to claim 21, wherein the supply electric power generating means includes voltage converting means for generating the supply electric power having a predetermined voltage from the held
5 electric power in the holding means.

23. (Previously Presented) The power supply system according to claim 16, wherein the fuel charged portion is detachable.

24. (Previously Presented) The power supply system according to claim 16, wherein the system controlling means comprises:

output controlling means for operating and stopping the
5 power generating means by controlling supply and shutoff of the power generation fuel to the power generating means;

a voltage monitor/control portion which outputs a first control signal which monitors a voltage component of the held electric power in the electric power holding means and controls
10 start-up and stop of the power generating means in accordance

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with a change in the voltage component, and a second control signal which controls the charging and stops the charging with respect to the electric power holding means; and

start-up controlling means for controlling supply of
15 start-up electric power used for operating the output controlling means and controlling an operation state of the power generating means based on at least the first control signal from the voltage monitor/control portion.

25. (Original) The power supply system according to claim 24, wherein the voltage monitor/control portion at least outputs the first control signal used for controlling the power generating means to stop when a voltage of held electric power in
5 the electric power holding means has reached a predetermined upper limit value, and the first control signal used for controlling the power generating means to start up when a voltage of held electric power in the electric power holding means has reached or become lower than a predetermined lower limit value.

26. (Previously Presented) The power supply system according to claim 24, wherein the start-up controlling means supplies a part of the held electric power in the electric power holding means to the output controlling means as the start-up
5 electric power when starting up the power generating means.

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27. (Previously Presented) The power supply system according to claim 16, wherein the power supply system is modularized, and a physical outside shape of the power supply system has a shape and dimensions which are substantially
5 equivalent to a shape and dimensions of a corresponding general-purpose chemical cell.

28. (Original) The power supply system according to claim 27, wherein the power supply system has a double-electrode terminal structure.

29. (Previously Presented) An electronic device connected to the power supply system according to claim 16, wherein the load operates with the supply electric power.

30. (Original) The electronic device according to claim 29, wherein parts except the fuel charged portion in the power supply system are integrally constituted with respect to the electronic device.

31. (Previously Presented) The electronic device according to claim 29, wherein the power supply system is modularized and

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at least the fuel charged portion is detachable with respect to the electronic device.

32. (Previously Presented) A power supply system which generates supply electric power, said power supply system comprising:

5 a fuel charged portion in which power generation fuel is charged;

power generating means for generating power generation electric power by using the power generation fuel;

output controlling means for operating and stopping the power generating means; and

10 start-up controlling means for supplying start-up electric power used for operating the output controlling means to the output controlling means;

wherein the start-up controlling means includes a start-up power supply portion which holds predetermined electric power
15 independently from the operation of the power generating means, and supplies the electric power from the start-up power supply portion to the output controlling means as the start-up electric power at the time of starting up the power generating means; and

20 wherein the start-up power supply portion includes a primary cell.

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33. (Previously Presented) A power supply system which generates supply electric power, said power supply system comprising:

a fuel charged portion in which power generation fuel is charged;

power generating means for generating power generation electric power by using the power generation fuel;

electric power holding means for holding electric charge based on the power generation electric power generated by the power generating means; and

system controlling means for controlling operation and stopping of the operation of the power generating means and for controlling charging and stopping of the charging of the electric power holding means in accordance with a change in the held electric power;

wherein the system controlling means comprises:

output controlling means for operating and stopping the power generating means by controlling supply and shutoff of the power generation fuel to the power generating means;

a voltage monitor/control portion which outputs a first control signal which monitors a voltage component of the held electric power in the electric power holding means and controls start-up and stop of the power generating means in accordance with a change in the voltage component, and a second control

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25 signal which controls the charging and stops the charging with
respect to the electric power holding means; and
start-up controlling means for controlling supply of
start-up electric power used for operating the output controlling
means and controlling an operation state of the power generating
30 means based on at least the first control signal from the voltage
monitor/control portion.